

ITS Standards Testing Program

Jerry L. Pittenger
Standards Testing Program Manager



ITS America
Annual Meeting
2001



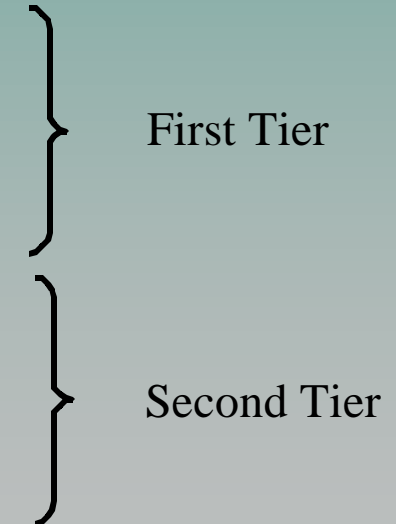
Objectives of the Standards Testing Program

- Provide information on reliability, functionality and performance
- Promote the early use of standards in system deployments
- Prove the standards in real transportation settings
- Provide feedback to SDOs

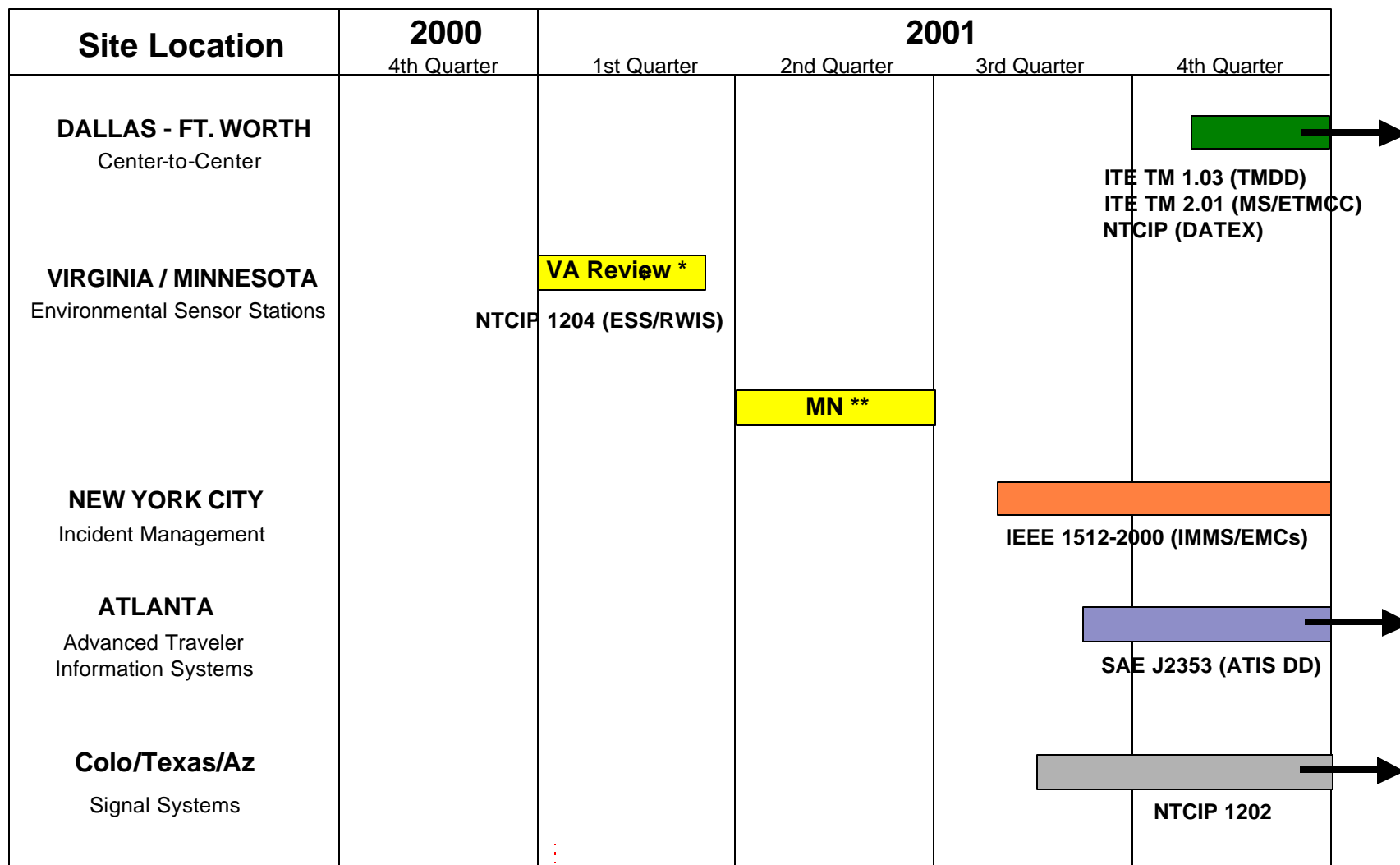


Standards Scheduled for Testing

- 91 ITS Standards published or under development
- 44 ITS Standards currently selected for testing
 - [[Http://www.its-standards.net/](http://www.its-standards.net/)]
- Testing emphasis being placed on:
 - Signal Systems (highest priority)
 - Center to Center / TMDD / MS-ETMCC
 - DMS (completed)
 - Incident Management
 - Transit (TCIP)
 - Environmental Sensing (ESS) (completed)



NEAR-TERM OPPORTUNITIES FOR ITS STANDARDS TESTING



* Review data from April 2000 standards tests by ENTERPRISE

** Supplemental ESS testing



Signal Systems (Priority)

Standards to be tested:

- NTCIP 1202

Current Activities

- Examining Sites (Lakewood / Houston / Orlando / Phoenix)
- Defining “Core Functions” for ATC (open for review by anyone)

Issues

- Some difficulties encounter by sites in using standards Major issues being resolved

Center-to-Center Test: Dallas/FW

Standards to be tested:

1489 - Standard DD for ITS

2304 - DATEX C2C

TM1.03 - TMDD

2303 - NTCIP-FTP-Application Profile

2202 - NTCIP-Internet Transport Profile

TM2.01 - Message Set for External TMC Comm.

Current Activities

- Finalizing agreements with TxDOT / Dallas / Ft. Worth for testing (MOU + CA)
- Reviewing functions for testing and developing test plans
- Site visit with FHWA RC representative to discuss testing status

Issues

- Delay decision of testing schedule to determine CSO plans for standards updates (June 15)

Incident Management: New York

Standards to be tested:

P1512: Incident Management

J1764: ISP-vehicle Location Referencing Standard (?)

TS 3.DCM: NTCIP - Data Collection & Monitoring Devices (?)

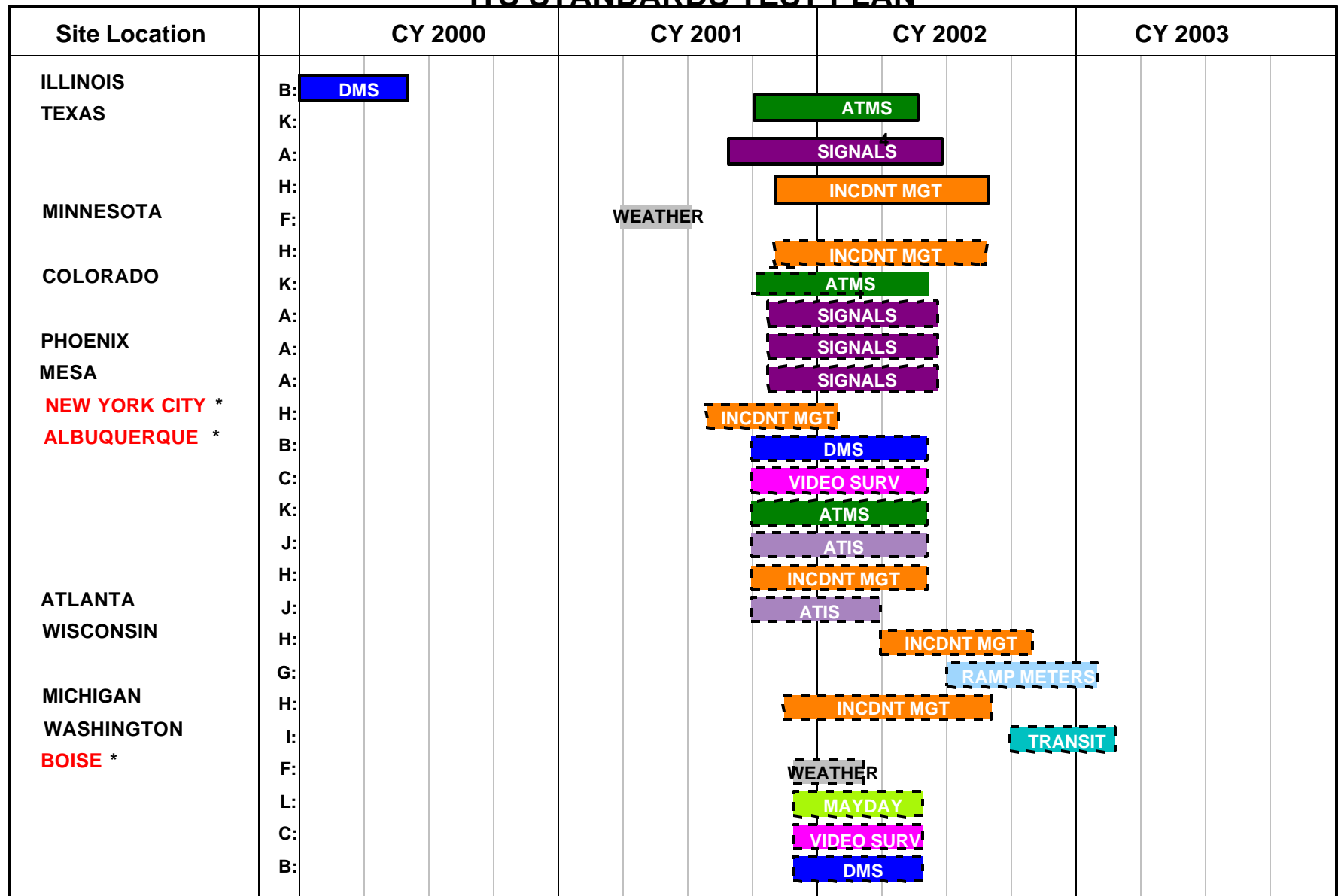
Current Activities

- Proceeding to coordinate testing work with site
- Defining IM core functions to be tested
- Working with FHWA Resource Center to assess what other standards are being used

Issues

- Contractor completion schedule is Summer 2001. Deployment team must meet schedule prior to standards tests.

ITS STANDARDS TEST PLAN



* Site Locations in RED indicate FY00 EARMARK
 = Start of Testing



= Standards and schedule information verified
 = Preliminary standards and schedule information



U.S. Department
of Transportation

ITS STANDARDS TEST PLAN Continued

Site Location		CY 2000				CY 2001				CY 2002				CY 2003			
MINNEAPOLIS*						MIGRATION DESIGN ▲ → Multiple Systems determined by design											
	K:																
	A:																
	H:																
	I:																
	J:																
	E:																
SPOKANE*	A:																
	B:																
	C:																
	H:																
CHICAGO*	K:																
	I:																
OREGON*	I:																
	B:																
NY MONROE COUNTY*	E:																
	H:																
OAKLAND*	D:																
	J:																
BALTIMORE*	J:																
PUGET SOUND*	I:																
	P:																
	O:																
	K:																

* Site Locations in **RED** indicate FY00 EARMARK
 **Balleine**



= Standards and schedule information verified

= Preliminary standards and schedule information



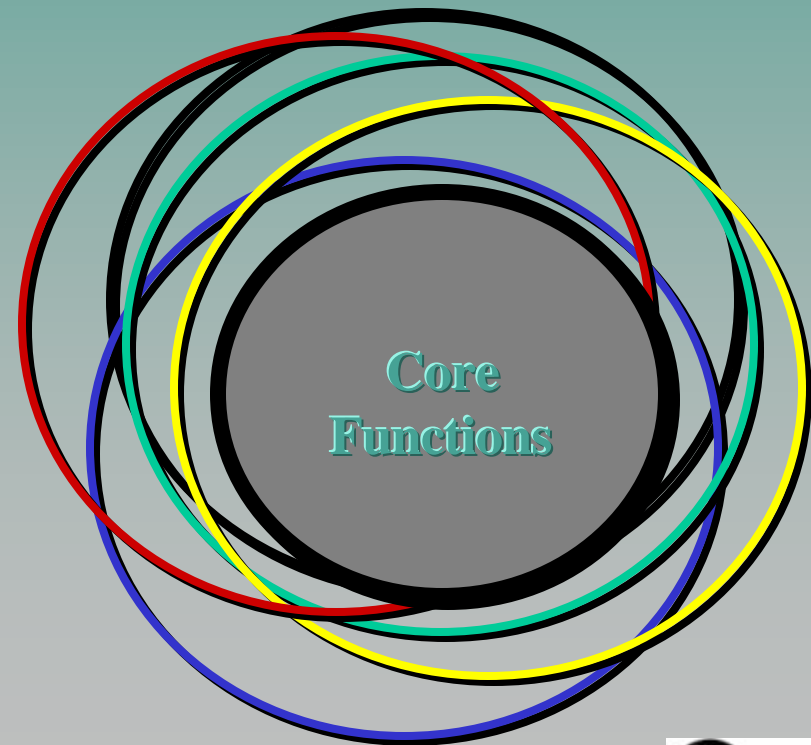
U.S. Department
of Transportation

What Do We Want to Test?

- Exhaustive testing of every feature and option is impossible
 - Lack of test sites
 - Not enough time
 - Not enough money
- Focus on the most used or the “Core” of each standard
- Core Functions defined with stakeholder inputs

Functional Universe:

Site- A B C D E



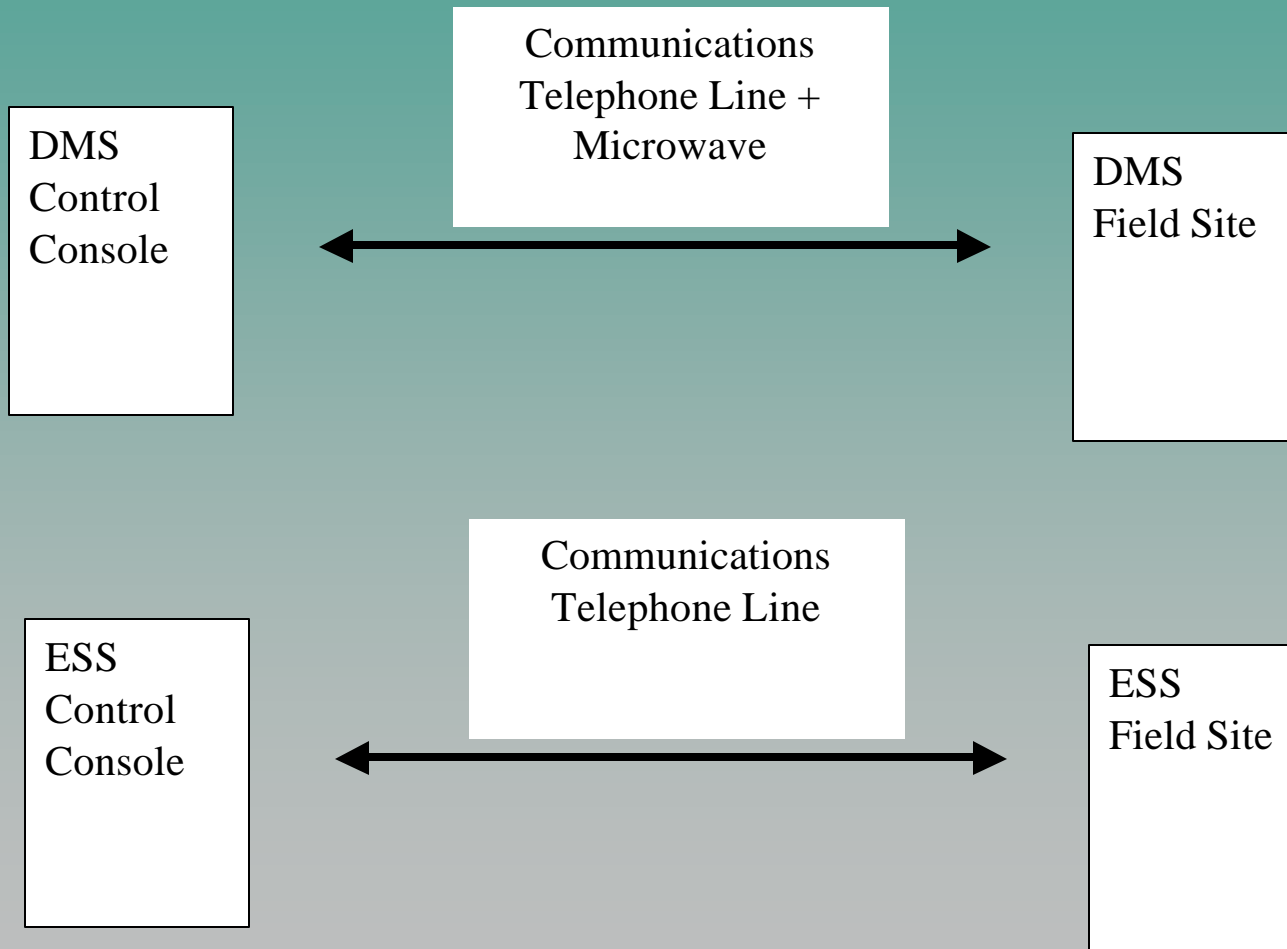
What Do We Continue to Look for in a Test Site?

- **Consistency with National ITS Architecture**
- **Use of standards**
 - Significant coverage of “core functions”
- **Willingness to participate**
 - allow access to systems
 - provide some level of resources to assist
- **Site complexity**
- **Willingness to share experiences for others to learn from their experiences**

Partnership

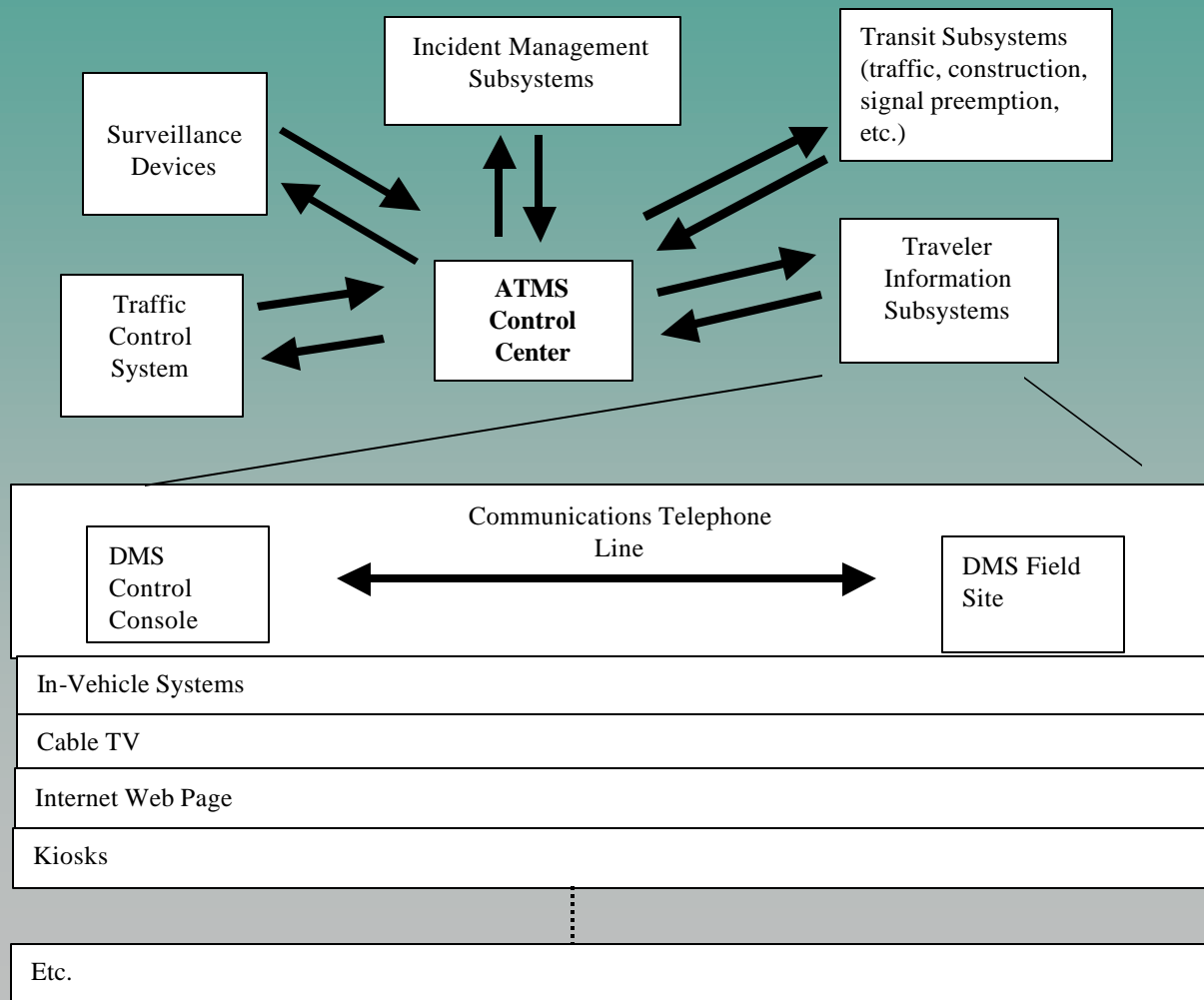
Testing a Standard - Site Complexity

(i.e. Illinois DMS test / Minnesota ESS test)



Testing for Interoperability

... More ITS functionality is needed



Challenges

- Finding test sites that are using ITS standards
- Finding test sites with more than one standard; multi-systems environment
- Evolution / refinement of standards
- Performing a testing process that is:
 - affordable
 - beneficial/convincing and
 - accepted by majority of Stakeholders

Updated Standards Information Readily Available on the Web - **a wealth of info**

- List of standards under development or approved
- Descriptions of each standard (fact sheets)
- Responsible Standard Development Organization
- Status of standards development
- Description and status of standards testing
- Important other internet links

[HTTP://WWW.ITS-standards.net/](http://www.its-standards.net/)

End